

### **REMARKS**

Claims 1-2, 4-13, 32-37 and 40-48, as amended, and new claims 50-52 are pending in this application. Claim 4 has been withdrawn from consideration. In this Response, Applicant has amended certain claims. In light of the Office Action, Applicant believes these amendments serve a useful clarification purpose, independent of patentability. Accordingly, Applicant respectfully submits that the claim amendments do not limit the range of any permissible equivalents.

In particular, the independent claims have been rewritten to clarify the invention. In addition, various dependent claims have been rewritten or canceled to address § 112 issues. Moreover, new claims 50-52 have been added to clarify that the compositions of the invention do not contemplate the use of polybutadiene or like rubber as a base. As no new matter has been added by the amendments herein, Applicants respectfully request entry of these amendments at this time.

### **REJECTIONS UNDER 35 U.S.C. § 112**

Claim 42 was rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement for the reasons provided on page 2. As with the previous rejections and subsequent amendments similar to this one for other dependent claims, Applicants respectfully submit that a skilled artisan would understand that the segment needs to have a hydrogen donor in order to react with the polyurethane backbone. The list of acrylates appearing after the transition phrase “comprises” merely provides the types of acrylates that can be included in the segment. In an effort to clarify the invention, however, the claim has been rewritten to elucidate this understanding. In particular, claim 42 has been rewritten to include “hydroxy-terminated” in front of each acrylate.

In addition, claims 39-40, 45, and 49 were rejected under § 112, second paragraph, as being indefinite for the reasons set forth on pages 2-3. In response, claims 39 and 49 have been canceled. Moreover, claim 40 has been rewritten to reflect its dependency from claim 32. Finally, claim 45 has been rewritten to exclude the second urea linkage.

In light of these amendments, Applicants respectfully submit that the § 112 rejections have been overcome. As such, Applicants respectfully request reconsideration and withdrawal of the § 112 rejections.

## **REJECTIONS UNDER 35 U.S.C. §§ 102 & 103**

### **Bradley Does Not Disclose or Suggest the Present Invention**

Claims 1-2, 5-6, 8-10, 39, and 49 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,152,836 to Bradley *et al.* or, in the alternative, under § 103(a) as being obvious over Bradley alone or in combination with Bradley and U.S. Patent No. 6,439,873 to Marshall as set forth on pages 3-4 of the Office Action. The Examiner also rejected claims 1-2, 5-10, 39, and 49 under § 103(a) as being obvious over Bradley in view of U.S. Patent No. 6,180,040 to Ladd *et al.* Bradley alone, or in any combination with the secondary references, fails to teach or even suggest the present invention for at least the reasons that follow.

Bradley generally discloses a golf ball that includes a typical rubber core blend in a cover. In particular, the cover formulation consists of 10 to 60 percent high cis-polybutadiene and 10 to 90 percent polyurethane rubber. Col. 2, line 61 to Col. 3, line 13. The examples demonstrate that the polyurethane rubber is used mainly as a softener for the base rubber composition. Col. 4, line 1 to Col. 5, line 4. The polyurethane rubber is not a backbone of the cover composition, nor is it able to be cast. Furthermore, the zinc diacrylate is used as a coagent in the rubber composition rather than a property improving component.

In contrast, claim 1 and those depending therefrom recite a cover composition that includes a polyurethane backbone, an acrylate functional component, and a free radical initiator. As discussed above, the polyurethane rubber of Bradley is not the backbone of the composition. Thus, Bradley does not disclose the present invention recited in claims 1 and those depending therefrom.

Furthermore, a skilled artisan would not have been motivated to modify the Bradley composition to use the polyurethane as the backbone without the present invention to use as a template. As such, Bradley alone does not render obvious the pending claims. Moreover, because the secondary references were limited in use to casting (Marshall) and azo initiators (Ladd), and because these references are directed to rubber-based *core* compositions, these references do not cure the deficiencies discussed above with respect to the pending claims.

Therefore, Applicants respectfully submit that Bradley alone, or in any combination with Marshall or Ladd, does not disclose or suggest the present invention. As such, Applicants respectfully request reconsideration and withdrawal of the §§ 102 and 103 rejections based on Bradley alone and in combination with the secondary references.

*Nesbitt Does Not Anticipate or Render Obvious the Present Invention*

Claims 1-2, 5-6, 8-9, and 11-13 were rejected under § 102(b) as being anticipated by U.S. Patent No. 6,303,704 to Nesbitt or, in the alternative, under § 103(a) as being obvious over Nesbitt alone or in combination of with Marshall. The Examiner also rejected claims 1-2, 5-9, and 11-13 under § 103(a) as being obvious over Nesbitt in view of Ladd. Like Bradley, Nesbitt also does not disclose or suggest the present invention for at least the reasons that follow.

Similar to Bradley, Nesbitt also lacks a polyurethane backbone in his cover composition. In fact, Nesbitt's list of polymers for use in the cover is completely silent as to polyurethanes. Col. 5, lines 1-39. And, without the use of impermissible hindsight, a skilled artisan would not have been motivated to arrive at the pending claims based on the Nesbitt disclosure. As such, Nesbitt is deficient with respect to the present invention at least for the same reason as Bradley. In addition, the secondary references fail to cure these deficiencies for the same reasons as outlined above with respect to Bradley.

Thus, Applicants respectfully submit that Nesbitt alone, or in any combination with the secondary references, does not anticipate or render obvious the pending claims. Accordingly, Applicants respectfully request reconsideration and withdrawal of the §§ 102 and 103 rejections based thereon.

*DiSalvo Does Not Disclose or Suggest the Present Invention*

Claims 1-3, 5-6, 8-9, 32-36, 39-41, 43, 45, 47, and 49 were rejected under § 102(b) as being anticipated by U.S. Patent No. 4,068,849 to DiSalvo *et al.* or, in the alternative, under § 103(a) as being obvious over DiSalvo alone or, also including claim 37, in combination of with Ladd. None of the cited references, or any combination thereof, disclose or suggest the present invention for at least the reasons that follow.

DiSalvo generally discloses a wound golf ball covered with a base rubber composition. *See* Abstract. In particular, the cover composition is described to include an unsaturated elastomer crosslinked with a chain comprising the reaction product of a monohydric alkenyl ester and a diisocyanate or a diisothiocyanate. Col. 1, lines 9-13. The unsaturated elastomer is polybutadiene or polyisoprene, which, from the examples, is included in 100 parts by weight. Col. 1, lines 18-21 and Col. 2, lines 30-37. The crosslinking agent, which, based on the formula shown, may include polyurethane as P<sub>z</sub>, is grafted onto

the backbone of the elastomer. Col. 1, lines 23-56. In fact, the purpose of the acrylate in DiSalvo is to facilitate the grafting process.

In contrast, the present invention is directed to a polyurethane backbone with at least one acrylate end cap that is cured with a peroxide. The backbone provides the resilient portion of the polymer, while the acrylic end segment provides crosslinkability and maximizes the urethane properties. *See e.g.*, Page 6, line 25 to Page 7, line 6. As such, the present invention is not a “graft” polymer, as disclosed by DiSalvo, as understood by those of ordinary skill in the art. And, DiSalvo does not disclose or suggest a polyurethane backbone as recited in the claims, but rather limits the backbone to polybutadiene and polyisoprene. Col. 1, lines 9-13. In fact, the DiSalvo process merely provides little chains of polyurethane pendant from the main polybutadiene or polyisoprene backbone. As such, DiSalvo does not anticipate the present invention.

In addition, a skilled artisan would not have been motivated to arrive at the pending claims absent impermissible hindsight based on DiSalvo, especially in light of the composition’s base formulation of rubber. In contrast, the thrust of the present invention is a polyurethane composition with acrylate end caps. And, even if one were to completely ignore the importance of the base rubber entirely in DiSalvo, it does not appear that the crosslinking agent in DiSalvo even produces an acrylate end-capped urethane. *See, e.g.*, Col. 2, lines 10-24. Furthermore, in contrast to the present invention, the free radical initiator in DiSalvo polymerizes the rubber, not the acrylate end caps. In fact, based on the process disclosed by DiSalvo, the polybutadiene or polyisoprene is fully polymerized by the peroxide. Col. 1, lines 54-65. As such, there is no excess peroxide to react with the acrylate. And, even assuming excess peroxide is present, there is not enough acrylate in the composition to be polymerized by any excess peroxide.

For at least these reasons, DiSalvo does not disclose or suggest the present invention. In addition, the limited disclosure of Ladd does not remedy the deficiencies of DiSalvo with respect to the present invention. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejections based thereon.

#### **LINED OUT REFERENCES**

It is unclear from the Examiner’s return of the Form PTO-1449 whether any of the references are considered as all references appearing thereon were lined through. In an effort to enable consideration of the foreign references, however, Applicants have provided the

print out from the esp@cenet database showing that German Patent No. 1,193,671 is also published as U.S. Patent No. 3,560,549, a copy of which is included. However, an English abstract is not available for French Patent No. 1,466,708 or Belgian Patent No. 634,741, which, according to the esp@cenet database, appear to be the related, if not the same, disclosures.

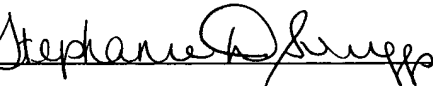
### CONCLUSION

All claims are believed to be in condition for allowance. If the Examiner believes that the present amendments still do not resolve all of the issues regarding patentability of the pending claims, Applicants invite the Examiner to contact the undersigned attorneys to discuss any remaining issues.

A Petition for Extension of Time is submitted herewith to extend the time for response one month to and including June 27, 2006. No other fees are believed to be due at this time. Should any fee be required, however, please charge such fee to Bingham McCutchen LLP Deposit Account No. 195127, Order No. 20002.0333.

Respectfully submitted,  
BINGHAM MCCUTCHEN LLP

Dated: June 27, 2006

By:   
Stephanie D. Scruggs, Registration No. 54,432  
BINGHAM MCCUTCHEN LLP  
3000 K Street, NW, Suite 300  
Washington, D.C. 20007  
(202) 373-6755 Telephone  
(202) 424-7647 Facsimile